DOCUMENT RESUME

ED 151 125 RC 010 388

AUTHOR Felice, Lawrence G.
TITLE Mexican American Achievement Performance: Linking the Effects of School and Family Expectations to Benefit the Bi-lingual Child.
PUB DATE 27 Mar 78
NOTE 27p.; Paper presented at the Annual Meeting of the American Educational Research Association (Toronto, Canada, March 27-31, 1978)

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Academic Achievement; *Bilingual Students; Comparative Analysis; Elementary Secondary Education; *Expectation; *Family Influence; Family School Relationship; Literature Reviews; Low Achievers; *Mexican Americans; Performance Factors; *Self Concept; Social Background
IDENTIFIERS Texas

ABSTRACT

Attempts to explain poor academic performance of Mexican American bilingual students have relied primarily on two causative models: home and school. Both models were evaluated with data from a matched sample of public school bilingual Mexican American children from grades 1-8, in a medium sized South-Central Texas community. The control group students, identified as low achievers, were participants in a compensatory educational program which consisted of a modified behavioral modification schedule and strategy designed to stimulate academic achievement through: the usual token economy reward structure; the use of bilingual tutors and various cultural activities designed to strengthen the self-concept of the Mexican American child; an effort to enlist the family's interest and cooperation in the educational process. These students were matched by age, grade, sex and social class with other Mexican American students not identified as poor achievers. Students in both groups were surveyed and tested in the fall and spring with the Metropolitan Achievement Test, the Piers-Harris Self-concept Scale, and measures of internal/external social power. Teacher's evaluative ratings were obtained and parents were interviewed in both time periods. After one year, experimental subjects had significantly higher reading and math scores and improved self-concepts. Regression analysis indicated higher achievement scores were due to self-concept gains, a result of the interaction of positive family and school expectations. (Author/NQ)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED151125

MAR 1978
ERIC/CRESS
RECEIVED

MEXICAN AMERICAN ACHIEVEMENT PERFORMANCE: LINKING THE EFFECTS OF SCHOOL AND FAMILY EXPECTATIONS TO BENEFIT THE BI-LINGUAL CHILD

By

Lawrence G. Felice

Paper presented at the annual meeting of the American Educational Research Association, Toronto, Canada, 27-31 March 1978.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Lawrence G. Felice

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Department of Sociology
Baylor University

RC010388

Mexican American Achievement Performance: Linking The Effects of School and Family Expectations To Benefit The Bi-lingual Child

LAWRENCE G. FELICE, Baylor University

Attempts to explain poor academic performance of Mexican American bi-lingual students have relied primarily on two causative models: home and school. This research evaluates both models with data from a matched sample of public school bi-linguals in an experimental program designed to enhance self-concept and cultural perception. After one year, experimental subjects had significantly higher reading and math scores and improved self-concepts. Regression analysis indicates higher achievement scores are due to self-concept gains, a result of the interaction of positive family and school expectations. Policy implications include the necessity for a "change the school" approach to successfully "change the child."

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

RESEARCH PROBLEM

The history of the treatment of Mexican Americans by U. S. public schools is a history of discrimination, neglect and failure. Most Mexican Americans, therefore, remember their educational experiences negatively and have achieved and attained less educationally than Anglo Americans. Substantiation for these generalizations rest with the personal comments, testimony and research of a variety of educators, authors and social scientists (Reynolds, 1933; Sanchez, 1967; Brussell, 1968; Ulibarri, 1969; Carter, 1970; Grebler, Guzman and Moore, 1970; U. S. Commission on Civil Rights, 1971, 1972, 1973, 1974). In attempts to explain why the educational achievement and attainment of Mexican Americans is below that of Anglo Americans, researchers have relied on two primary models. One model locates the reason for this educational failure in the Mexican American child. The other model utilizing a totally different explanation for low educational achievement and attainment, locates the reason in the schools, especially in assignment policies, tracking practices and teachers' attitudes. Researchers using either model, however, generally agree that bi-lingual Mexican American students have the most negative school experience and exhibit poor educational performance (Darcy, 1953; Johnson, 1953; MacNamara, 1966; Carrow, 1972; Palomares, 1972). The purpose of this research is to evaluate the two models offered in the literature to explain low levels of Mexican American educational achievement and attainment, and to propose an additional model which synthesizes portions of each. This

synthetic model is one in which teacher's expectations of Mexican American student educational performance are hypothesized to interact with family social position and parental value expectations to impact on student self-concept and social power, which in turn, exercise a direct effect on student achievement and performance.

REVIEW OF THE LITERATURE

Even with the documented history of poor Mexican American educational achievement, some cite the recent enactment of the Bi-Lingual Education Act of 1968 as evidence of federal support for innovative and experimental programs to modify the educational experiences of Spanish speaking Mexican American children. And it should not be denied that a variety of school districts have responded with programs designed to "change the child". Recent statistics, however, indicate Mexican American youth are still not receiving an equal educational opportunity (as measured either by the outputs of achievement or attainment). Mexican American students continue to manifest high dropout rates (Felice, 1973), low achievement performance (Coleman, 1966; U. S. Commission on Civil Rights, 1971) and reduced access to middle and/or high prestige occupations after school graduation (Lopez, 1976).

The most comprehensive recent report on the educational attainment and performance of Mexican Americans comes from the Mexican American Education Study conducted by the U. S. Commission on Civil Rights. In the first report (U. S. Commission on Civil Rights, 1971a), the ethnic isolation and segregation of Mexican Americans is detailed. Findings reveal Mexican American students to be isolated within a few schools in school districts and to be ethnically segregated in the other schools in the district. The second report in the series (1971b) comments on the results of such isolation and segregation, with

data which reveal Mexican Americans manifest lower reading achievement less grade advancement, less extracurricular school activities and higher dropout rates. Other research supporting these findings includes Coleman (1966), Felice (1973) and Lopez (1976). These recent statistics on the educational performance of Mexican Americans are consistent with findings reported in earlier studies (Reynolds, 1933; Sanchez, 1967; Brussell, 1968 and Ulibarri, 1969).

One model of explanation for this low educational performance of Mexican Americans locates the cause in the bi-lingual status and cultural values of Mexican society. Some of those who propose this model suggest it is valid due to the bi-lingual nature of many Mexican American youth and the particular problems bi-lingualism in Spanish presents (Holland, 1960; Matluck and Mace, 1973). Some social scientists have even contended that bi-linguals are inferior in intelligence to mono-linguals (Jones and Stewart, 1951; Johnson, 1953). Others have found bi-linguals less able to comprehend basic English (Carrow, 1972; Matlock and Mace, 1973). According to this interpretation of "the trouble is with the child" mode, lower achievement performance is due to the Mexican American's bi-lingual status. The other interpretation of "the trouble is with the child" model locates the primary cause in the cultural values and cultural patterns of Mexican society. As Ulibarri (1969) suggests, the rapid urbanization of Mexican Americans from a traditionally oriented society to an achievement oriented society has made the socio-cultural patterns of Mexican American culture dysfunctional. Ulibarri states that the value orientations of extended family structure, personalistic relationships, the slower tempo of life and a personal committment to work while functional in the rural Mexican society are dysfunctional to contemporary U. S. Society and which predispose many Mexican Americans to become members of a "culture of poverty".

Socio-economic status is associated with both low educational performance, rural Mexican cultural values and bi-lingual status (especially home Spanish/school English). Lower socio-economic status Mexican Americans are more likely to speak only Spanish at home and more likely to achieve less in school (Palomares, 1972). Other studies indicate this relationship is fairly complex, with low family socio-economic status associated with differences in family value patterns. As Ulibarri suggests (1969), the more rural, dysfunctional value patterns of lower class Mexican American families; families more likely to speak only Spanish at home, are more congruent with less value of education and the process of schooling. A general suspiciousness of schooling permeates the lower class Mexican-American home (Ulibarri, 1969). The lower class, Spanish speaking Mexican American family is seen to neither value education nor provide substantial encouragement to their children for educational success. With the additional difficulties involved due to the bi-lingual status of many Mexican American children (Darcy, 1953; Johnson, 1953; Haugen, 1956; Peal and Lambert, 1962; MacNamara, 1966; Carrow, 1972; Palomares, 1972) it is not difficult to see why such children would not value education highly, achieve less, attain less and drop out at a higher rate than others. The Mexican American child caught in this web of difficulty will have a negative school experience of such magnitude that he or she may come to reject the educational institution and the larger society that institution represents.

The other model found in the literature to explain the low educational achievement and attainment of Mexican Americans locates the cause not in the individual child, but in the schools and in the failure of the educational institution to provide an equal educational opportunity for Mexican Americans. Prejudicial attitudes are one such reason for differential treatment in

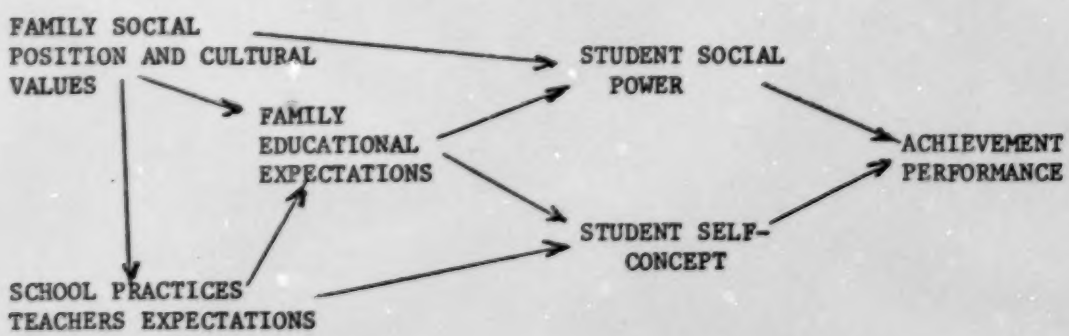
school. Knowlton (1965:3) reports on the ethnic prejudices of teachers that equate Mexican American culture with intellectual inferiority. Carter (1970) reports many teachers simply do not make any attempt to educate the Mexican American children in their classrooms. Why waste one's time? Ethnic prejudice provides teachers with extremely low expectations for Mexican American achievement performance. These low expectations are often confirmed by student performance, especially in the case of the bi-lingual child. Matlock and Mace (1973) document the phenomenon that certain language characteristics of Spanish-English bi-lingualism increase a child's difficulty in the perception of English, which may manifest itself in lower achievement performance, since assignments may be only partially understood, etc. Thus, this phenomenon may generate or confirm the expectation of poor performance and/or failure.

As suggested in the fifth report of the Civil Rights Commission (1973) such differential attitudinal expectations concerning the abilities of Mexican American children become translated into actual differences in behavior. Using a modification of Flander's interaction process categories (Flanders, 1963) the Civil Rights Commission Report (1973) concludes that teachers do not interact as positively with Mexican American youth as with Anglos and that self-fulfilling prophecies of failure are generated and sustained in the schools for Mexican American children. Carter's research (1970) suggests that the combination of teachers' differential expectations and behavior with other school practices such as tracking and punitive assignment policies leads to a situation in which the school itself causes the Mexican American child to fail. By its rejection of the Mexican American, the school forces poor academic performance and low educational attainment. In order to maintain any sort of healthy self-concept and self-esteem, the

Mexican American child is forced to reject the school and the educational attainment it can provide.

The alternative model of explanation of low Mexican American achievement performance proposed in this paper is a synthesis of the two models which have been reviewed. This synthetic model combines the lack of interest in, and lack of support for education in the lower class Spanish home with the low expectations of performance at school, to produce a negative school experience for most Mexican American children. Lower class family position and cultural values which confirm less individual social power are held to combine with negative school expectation of performance and the lower self-concept such expectations generate to produce poor achievement performance. Poor academic performance, in turn, confirms feelings of inadequacy which leads to a variety of behavior including truancy, poor grades, dropping out of school and poor job training. Bowles and Gintis (1976) comment extensively on the attitudes toward life and work created by schools, and how such labor force tracking serves the status quo of the economic system. Diagram A depicts the model proposed in this paper.

DIAGRAM A



Simply stated, the model hypothesizes that teacher's expectations of student performance and parental social position and cultural values have a joint impact on the Spanish bi-lingual Mexican American child's self-concept and social power, which jointly determine achievement performance.

SAMPLE AND METHODOLOGY

Data for this paper are from a matched sample of bi-lingual Mexican American children from grades 1 through 8, in a medium sized South-Central Texas community. Teachers and counselors from the school district identified Mexican American students they considered to be in need of remedial educational service for a government financed, locally administered tutoring program. These students, identified as low achievers and likely to become truants and dropouts, were contacted by the administering Mexican American organization to see if they would like to participate in this compensatory educational program. The full program consisted of a modified behavioral modification schedule and strategy which was designed to stimulate academic achievement through the usual token economy reward structure but with two additional features: one, the use of bi-lingual tutors and a variety of cultural activities designed to strengthen the self-concept of the Mexican American child and two, an effort to enlist the interest and cooperation of the child's family as a participant in the educational process. Tutoring sessions occurred in small groups of 3-5 students after school 3 days a week plus some Saturdays. Students participating in this program were matched with other Mexican American students attending school who had not been identified by the staff as poor achievers. Students were matched on four variables: age, grade, sex and social class. The control group did

not participate in any project activities. Students in both groups were surveyed and tested in the fall and spring with the Metropolitan Achievement Test, the Piers-Harris Self-Concept Scale, measures of internal/external social power, operationalized here by Coleman's sense of control of environment (1966) and several attitudinal and demographic measures. Teacher's evaluative ratings were obtained in fall and spring and parents were interviewed in both time periods by project staff.

FINDINGS

Before and after reading and math achievement scores for Mexican American bi-lingual students in the experimental bi-lingual, bi-cultural program and in the control setting are presented in Tables 1 and 2.

TABLES 1 and 2

Results for both reading and math scores are similar. T-tests reveal differences in achievement scores prior to the program are not significant between the two groups. Differences in 1975 scores between the two groups are statistically significant and indicate that students in the experimental bi-lingual, bi-cultural program have significantly increased their achievement over the normal school increase as seen in the scores of the control group. It is important to underscore that this significantly higher rate of achievement among the experimental bi-lingual students is completely opposite from what had been predicted by the teachers and counselors. These are the same students labelled as poor achievers and likely truants and school behavior problems.

Tables 3 and 4 indicate the changes in self-concept and social power that took place from the fall to spring time period.

TABLES 3 and 4

T-tests reveal differences in self-concept and perceived social power between the two groups are not significant prior to their participation in the experimental program. At the end of the program, however, bi-lingual students in the experimental program have significantly increased their social power scores as well as achieving significantly more positive self-concept scores. Changes in the control group are much less dramatic. It is evident that participation in the experimental bi-lingual, bi-cultural Project Emerge program has provided substantive academic improvement for those in the program. In addition, the self-concept and social power scores of students in the program have substantially improved.

While the apparent success of this experimental bi-lingual, bi-cultural tutoring and enrichment program is an important finding for this paper, the more important focus is with the analysis of the precise reasons why students in the program did so improve and also to find the reasons why some students in the program improved more than others. Thus, for this type of analysis, we turn to correlation and regression techniques to investigate the configuration of determinants of achievement improvement among Project students. Table 5 presents the correlation matrix and operationalization of all variables used in the regression analysis.

TABLE 5

Standardized and unstandardized regression coefficients for the dependent variable of reading achievement scores are presented in Table 6.

TABLE 6

Comparing standardized regression coefficients indicates social power exercises the largest effect on reading improvement of all the variables included. Those bi-lingual students in the program whose social power

scores had increased manifested greater reading improvement. Other important factors contributing to increases in reading achievement include parental school appraisal, student cultural development and parental educational interest. Students in the program who gained the most in reading achievement are those with greater sense of social power and increased understanding of their Mexican culture whose parents are not only more satisfied with their child's school, but offer more support and encouragement for educational performance. Unstandardized regression coefficients indicate the real effect of an independent factor on the dependent variable or in the case of parental school appraisal, a change of one unit in the direction of positive parental school appraisal results in a 10.119 point increase in reading achievement scores.

Table 7 presents the results of the regression analysis for the dependent variable of math scores.

TABLE 7

Standardized regression coefficients indicate social power perception and self-concept and parental educational interest have the greatest direct effect on improvement in math performance. Unstandardized coefficients again reveal the impact of each factor, with an increase of one unit in sense of social power, e.g., "producing" an increase of 12.8 points in improvement in math scores. Those students in the experimental program who improved the most in math achievement were those students who had an increase in sense of social power, increased positive self-concept and who came from families in which the parents were interested in and supported educational performance.

With the importance of the effects of social power perception and self-concept for improvement in reading achievement and math achievement, the

next step in the analysis was to investigate the determinants of these two psychological variables. Tables 8 and 9 present the results of regressions run with sense of social power and self-concept as the dependent variables.

TABLES 8 and 9

Singnificantly, parental socialization techniques exercise the largest effect for both dependent variables, with teacher's expectations also exercising a significant effect. In an analysis of this type, it becomes important to check on possible reciprocal effects which would invalidate the assumption of recursiveness. For this reason, social power was included in the stepwise regression program for the dependent variable of self-concept, but was not selected due to its lack of relationship to self-concept. Similarly, self-concept was included in the regression equation with social power as the dependent variable and was rejected in data processing due to its lack of association. Thus, social power and self-concept are concluded to be separate, independent factors. Both reading and math achievement scores were included as independent variables in these same two regressions, but they too were not selected by the stepwise computer procedure. Thus, we conclude that there is no evidence that for bi-lingual Mexican American students, achievement performance determines sense of social power. The conclusion of this paper is that self-concept and sense of social power determine achievement performance independently.

On the results of these conclusions, two path models were generated; Table 10, the path model for reading achievement and Table 11, the path model for math achievement.

TABLES 10 and 11

These models are presented and utilized in a descriptive mode since precise testing of the model, reproduction of the correlation matrix and decomposition

of effects must wait for the next paper from this data set. It is sufficient for the present, however, to summarily state that both are 2 stage models in which a variety of family and individual variables are conceptualized as producing an impact on the bi-lingual students' self-concept and sense of social power, which in turn, exercises moderate effects on math and reading achievement improvement.

CONCLUSIONS

Poor educational achievement and attainment of bi-lingual Mexican American students was hypothesized to be a function of both a lack of value of and support for education in the home and of low expectations of performance at school. While it was not possible to test all aspects of this model with the same type of analysis, due to characteristics of the data set, general confirmation of the hypothesis is provided. Students in the experimental program had been identified and labelled by teachers and staff. The expectations of their performance was low. Responding to the experimental program techniques to improve cultural awareness and develop positive self-concepts and increase perceived social power, the positive achievement gains of the students in the experimental program demonstrates the effect of positive expectations in raising achievement. The program also demonstrates the ease with which intervention programs can be utilized. Analysis of those students within the program demonstrates the effect of parental education interest and encouragement, and its effects on achievement.

At the end of the year, teachers' evaluations had also changed. Now, experimental program students were identified as "hard working," "intelligent" and "more mature". In the final analysis, participation in the program did

"change the child". Many of the families of the children in the program had taken a more active interest in the educational activities of the child and this along with developments and activities within the program provided for growth in positive self-concept and increased sense of social power. All of this combined in an atmosphere of success in achievement to the point that significant increases in learning took place, or at least, the old psychological impediments to learning or to communicating what had been learned did not prevent the child from self-expression. But in order to "change the child," it took a radical "change of the school," for the type of bi-cultural, bi-lingual, tutoring enrichment program evaluated in this paper is nothing short of a complete 180 degree reversal of the typical school experience most Mexican Americans receive. Our final conclusion is that it is the school context that is most important in the educational achievement and attainment of bi-lingual Mexican American students. Thus, we would have to agree with Carter (1970) that the only real solution to the low educational attainment and achievement of many bi-lingual Mexican Americans is for a radical modification of the school to eliminate those factors which discourage success and produce failure. One interesting conjecture from this study is that a hand-picked, sensitive, bi-lingual staff is almost certainly a necessity. Another implication comes from the amount of input the Alliance of Mexican Americans made into this program. Some form of decentralized, partial community control would appear to be an important facet to the goal of equal educational opportunity. Until then, it is simply all too easy for schools which exclude the Mexican American culture, teacher and administrator, (to paraphrase the words of Bowles and Gintis (1976)) to abandon the Mexican American student in his quest for an equal opportunity so that he must take whatever work is available in the labor market: a market rife with prejudice and exploitation.

TABLE 1

READING ACHIEVEMENT SCORES: RESULTS OF EXPERIMENTAL TREATMENT CONDITION

	Pre-Test 1974	Post-Test 1975	
Experimental Condition	20.58	41.19	(72)
Control Condition	19.69	31.51	(72)
	t-test .156 Sig. = .85	t-test 2.48 Sig. = .02	

TABLE 2

MATH ACHIEVEMENT SCORES: RESULTS OF EXPERIMENTAL TREATMENT CONDITION

	Pre-Test 1974	Post-Test 1975	
Experimental Condition	18.90	48.61	(72)
Control Condition	19.85	38.23	(72)
	t-test .413 Sig. = .75	t-test 2.52 Sig. = .02	

TABLE 3

PIERS-HARRIS SELF-CONCEPT SCORES: RESULTS OF EXPERIMENTAL TREATMENT CONDITION

	Pre-Test 1974	Post-Test 1975	
Experimental Condition	64.01	95.32	(72)
Control Condition	60.31	61.58	(72)
	t-test .436 Sig. = .74	t-test 2.273 Sig. = .05	

TABLE 4

SOCIAL POWER SCORES:RESULTS OF EXPERIMENTAL TREATMENT CONDITION

	Pre-Test 1974	Post-Test 1975	
Experimental Condition	8.79	23.43	(72)
Control Condition	6.32	8.65	(72)
	t-test 1.12 Sig. = .35	t-test 2.32 Sig. = .03	

TABLE 5

INTERCORRELATION MATRIX FOR ALL VARIABLES

	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	X_{13}
X_1	1.00	.634	.101	.062	.239	-.090	.349	.030	.099	.235	.249	.242	.049
X_2		1.00	.087	.062	.218	-.026	.432	.006	.019	.247	.249	.211	.014
X_3			1.00	.927	.269	.033	.273	.513	.400	.191	.301	.264	.126
X_4				1.00	.320	.003	.309	.541	.445	.198	.310	.290	.192
X_5					1.00	.264	.381	.332	.380	.024	.067	.008	.078
X_6						1.00	.036	.041	.016	.065	.052	.000	.165
X_7							1.00	.331	.237	.441	.395	.293	.092
X_8								1.00	.718	.153	.226	.144	.332
X_9									1.00	.053	.133	.111	.253
X_{10}										1.00	.838	.777	.018
X_{11}											1.00	.741	.084
X_{12}												1.00	.010
X_{13}													1.00

X_1 1973 Reaching Achievement, Metropolitan Achievement Test
X_2 1973 Math Achievement, " " "
X_3 1975 Reading Achievement, " " "
X_4 1975 Math Achievement, " " "
X_5 Teacher's Expectations, Survey scale, Felice (1972)
X_6 Social Power - same questions used by Coleman in the EEOS, Coleman, et.al.,
X_7 1966, pp. 281,288.
X_8 Sense of Control of Environment same questions used by Coleman in the EEOS Coleman, et. al., Equality of Educational Opportunity, 1966 pp. 281,288

X_9 Parental Socialization Mode Measured with items developed by Elder(1963) and Douvan and Adelson(1966) relating to a respondent's perception of parental power as reasonable and rational and with parental use of physical versus psychological forms of rewards and punishments.

X_{10} Parental School Appraisal Measured by a 5 point scale on which parents indicated how satisfied they were with their child's school.

X_{11} Parental Educational Interest Measured by a scale which combines parents interest in their child's education with the amount of encouragement they offer the child to do well in school, to finish homework assignments, etc.

X_{12} Student Cultural Development Combines parents responses to questions concerning the amount of material the child is learning about his Mexican cultural side and Program staff evaluations about the same area.

X_{13} Parental SES Measured with Hollingsheads Two Factor Index of Social Position

TABLE 6

DETERMINANTS OF READING ACHIEVEMENT OF EXPERIMENTAL BI-LINGUAL PROGRAM STUDENTS

Independent Variable	Unstandardized Regression Coefficient	Standardized Regression Coefficient	F Value
Social Power	9.529	.357	11.67
Parental Educational Interest	7.106	.259	5.20
1974 Reading Achievement	0.312	.259	11.93
Student Self-Concept	0.132	.127	2.42
Student Cultural Development	7.031	.293	4.94
Parental School Appraisal	10.119	.316	4.75
Teacher's Expectations	0.253	.038	0.46
Parental SES	1.455	.049	0.43
Parental Socialization Mode	1.063	.051	0.26
(Constant)	9.533		

$R = .62574$ $R^2 = .39155$

	d.f.	Sum of Squares	Mean Square	F
Regression	9	23401.266	2600.14	9.58135
Residual	134	36364.233	271.37	Sig. = .000

TABLE 7

DETERMINANTS OF MATH ACHIEVEMENT OF EXPERIMENTAL BI-LINGUAL PROGRAM STUDENTS

Independent Variable	Unstandardized Regression Coefficient	Standardized Regression Coefficient	F Value
Social Power	12.807	.413	32.47
Parental Educational Interest	6.266	.196	3.99
Student Self-Concept	0.283	.234	10.05
1974 Math Achievement	0.227	.198	7.63
Student Cultural Development	2.936	.105	1.09
Teacher's Expectations	3.649	.081	1.23
Parental SES	1.453	.032	1.03
(Constant)	2.414		

$R = .63281$ $R^2 = .40045$

	d.f.	Sum of Squares	Mean Square	F
Regression	7	32344.565	4620.65	12.976
Residual	136	48426.937	356.08	Sig. = .000

TABLE 8

DETERMINANTS OF SOCIAL POWER SCORES OF EXPERIMENTAL BI-LINGUAL STUDENTS

Independent Variable	Unstandardized Regression Coefficients	Standardized Regression Coefficients	F Value
Parental Socialization Mode	.498	.639	116.96
Teacher's Expectations	.011	.166	8.36
Parental SES	.173	.155	7.25
(Constant)	.574		

$R = .75182$ $R^2 = .56524$

	d.f.	Sum of Squares	Mean Square	F
Regression	3	47.444	15.815	60.671
Residual	140	36.493	0.261	Sig. = .000

TABLE 9

DETERMINANTS OF SELF-CONCEPT SCORES OF EXPERIMENTAL BI-LINGUAL PROGRAM STUDENTS

Independent Variables	Unstandardized Regression Coefficients	Standardized Regression Coefficients	F Value
Teacher's Expectations	.501	.283	13.382
Parental Socialization Mode	6.747	.336	20.845
Sex of Subject	9.271	.248	12.469
Parental SES	4.321	.151	4.324
(Constant)	29.308		

$R = .58432$ $R^2 = .34283$

	d.f.	Sum of Squares	mean Square	F
Regression	5	18939.182	3787.36	14.36
Residual	138	36461.706	264.22	Sig. = .000

TABLE 10

PATH DIAGRAM FOR THE EXPLANATION OF READING ACHIEVEMENT SCORES OF EXPERIMENTAL BI-LINGUAL PROGRAM STUDENTS

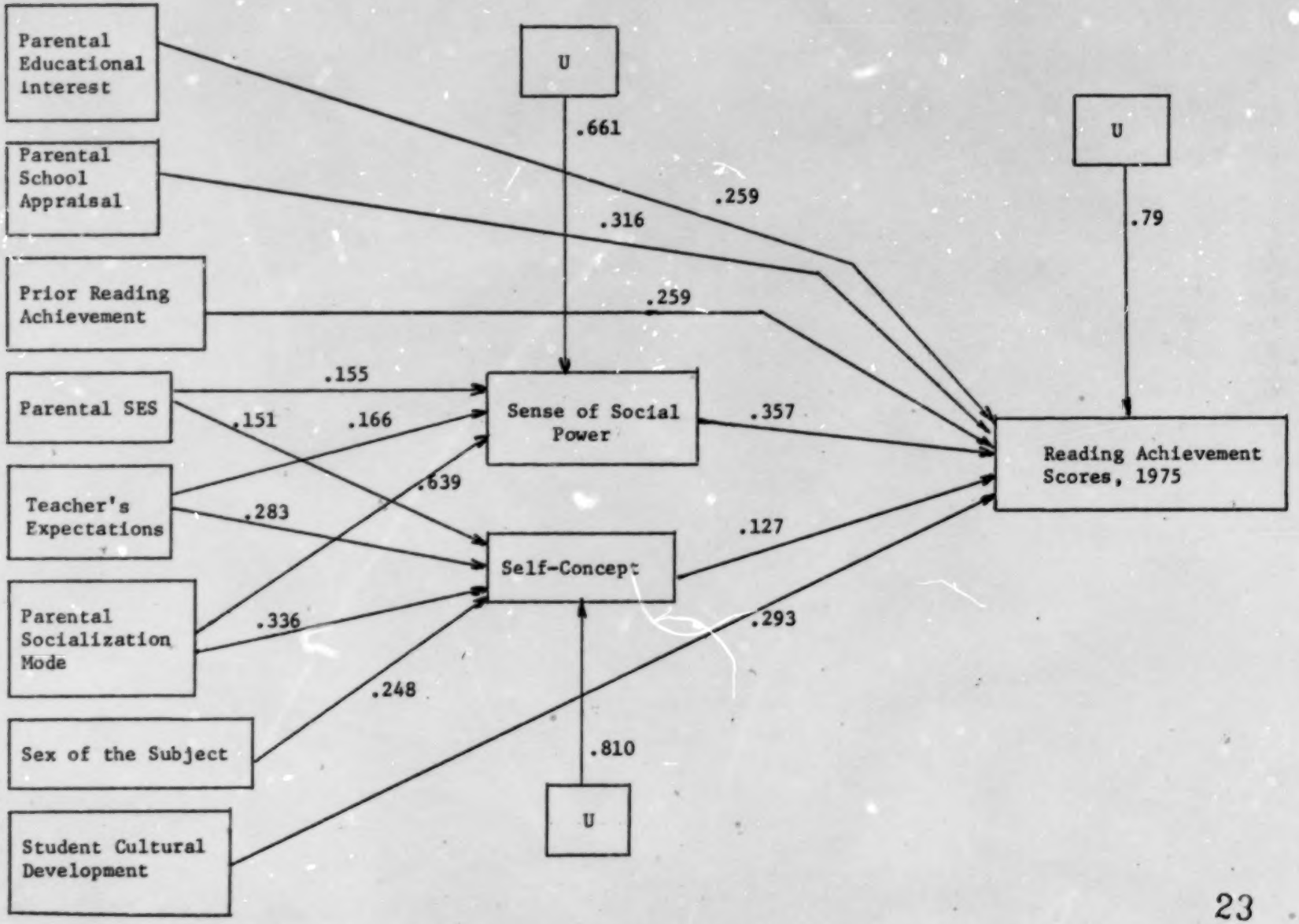
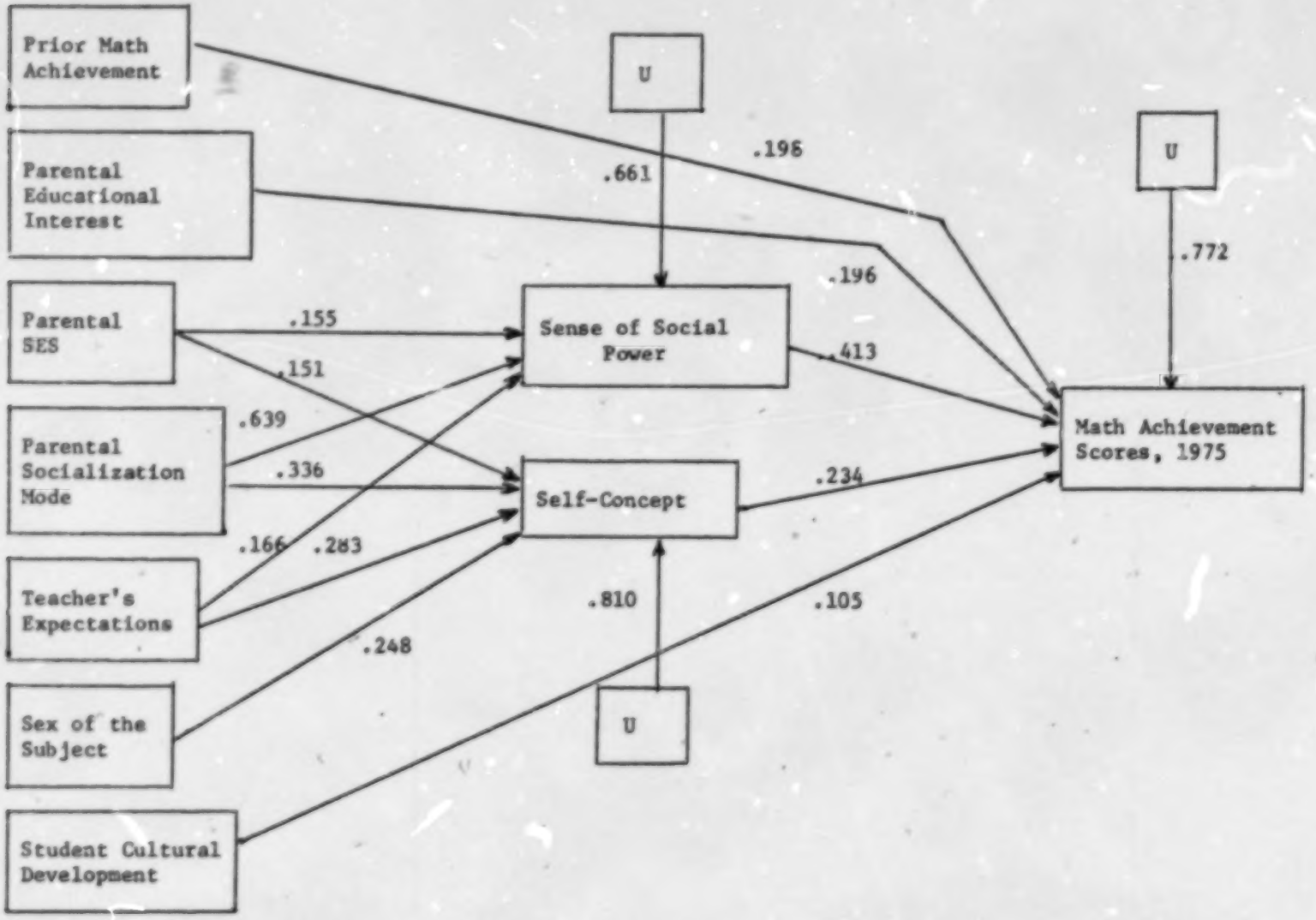


TABLE 11

PATH DIAGRAM FOR THE EXPLANATION OF MATH ACHIEVEMENT SCORES OF EXPERIMENTAL BI-LINGUAL PROGRAM STUDENTS



Bibliography

Bowles, Samuel and Herbert Gintis
1976 Schooling in Capitalist America. New York: Basic Books

Brussell, Charles B.
1968 Disadvantaged Mexican American Children and Early Educational Experience. Austin: Southwest Educational Laboratory.

Carrow, E.
1972 "Auditory Comprehension of English by Monolingual and Bilingual Pre-School Children", Journal of Speech and Hearing Research. Vol. 15, pp. 407-412

Carter, Thomas P.
1970 Mexican Americans in School: A History of Educational Neglect. New York: College Entrance Examination Board

Coleman, James, et. al.
1966 Equality of Educational Opportunity. Washington: U.S. Government Printing Office

Felice, Lawrence G.
1973 "Mexican American Self-Concept And Educational Achievement:The Effects of Ethnic Isolation and Socioeconomic Deprivation", Social Science Quarterly, March:716-726

Grebler, Leo, Joan W. Moore and Ralph Guzman
1970 The Mexican American People: The Nation's Second Largest Minority. New York: The Free Press

Johnson, G.B.
1953 "Bilingualism as Measured By A Reaction Time Technique and the Relationship Between a Language and a Non Language Intelligence Quotient", Journal of Genetic Psychology. 82:3-9

Jones, W.R. and W. Stewart
1951 "Bilingualism and Verbal Intelligence", British Journal of Psychology 4:3-8

Lopez, David E.
1976 "The Social Consequences of Chicano Home/School Bilingualism", Social Problems. 24:234-247

MacNamara, John
1966 Bilingualism and Primary Education. Edinburgh:Edinburgh University Press.

Matluck, Joseph H. and Betty Mace
1973 "Language Characteristics of Mexican American Children: Implications For Assessment", Journal of School Psychology. 11:365-386

Palomares, Uvaldo
1967 "Assessment of Rural Mexican American Students in Grades Pre-School Through Twelfth". ERIC ED 013690

Peal, Elizabeth and Wallace Lambert
1962 "The Relation of Bilingualism To Intelligence", Psychological Monographs, General and Applied, Vol. 76

Rehberg, Richard A., Walter Schaeffer and Judie Sinclair
1970 "Toward a Temporal Sequence of Adolescent Achievement Variables", American Sociological Review, :34-48

Reynolds, Anne
1933 The Education of Spanish Speaking Children in Five Southwestern States. Washington, D.C.: U.S. Government Printing Office

Sanchez, G.I.
1967 Forgotton People:A Study of New Mexicans. Albuquerque: Calvin Horn Publishers

Ulibarri, Horacio
1969 "Education of Mexican Americans:Problems and Issues" Mimeo.

United States Commission on Civil Rights
1971a Mexican American Study Report I: Ethnic Isolation of Mexican Americans in the Public Schools of the Southwest. Washington, D.C.: U.S. Government Printing Office

1971b Mexican American Educational Series, Report II The Unfinished Education. Washington, D.C.:U.S. Government Printing Office

1972 The Excluded Student, Report III. Washington, D.C.:U.S. Government Printing Office

1973 Mexican American Education in Texas: A Function of Wealth, Report IV. Washington, D.C. U.S. Government Printing Office

1974 Teachers and Student, Report V, Mexican American Education Study, Differences in Teacher Interaction with Mexican American and and Anglo Students. Washington, D.C.:U.S. Government Printing Office